

Abstract

Wavelength reference apparatus for use in calibrating a tunable Fabry-Perot filter or a tunable VCSEL, whereby the device may be tuned to a precise, known wavelength, the wavelength reference apparatus comprising an LED, where the LED is chosen so as to have an emission profile which varies with wavelength; an etalon, where the etalon is chosen so as to have a transmission profile which comprises a comb of transmission peaks, with each transmission peak occurring at a precise, known wavelength; and a detector for detecting the light emitted by the LED and passing through the etalon; whereby when a tunable Fabry-Perot filter or tunable VCSEL is positioned between the etalon and the detector, and the device is swept through its tuning range by varying the tuning voltage applied to the device, the known transmission wavelengths established by the LED and the etalon can be correlated to counterpart tuning voltages of the device, whereby to calibrate the device.